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PATENT APPLICATION**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q96434

Masaaki HIRANO, et al.

Appln. No.: 10/588,485

Group Art Unit: 1614

Confirmation No.: 8206

Examiner: not yet assigned

Filed: August 4, 2006

For: PROPANE-1, 3-DIONE DERIVATIVE OR SALT THEREOF

INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §§ 1.97 and 1.98**MAIL STOP AMENDMENT**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicants hereby notify the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

One copy of each of the listed documents is submitted herewith, except for the following: U.S. patents and/or U.S. patent publications; and co-pending non-provisional U.S. applications filed after June 30, 2003.

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after

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INFORMATION DISCLOSURE STATEMENT
U.S. Appln. No.: 10/588,485

Attorney Docket No.: Q96434

filings a request for continued examination (RCE) under §1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, Applicants submit the following explanations:

English language abstracts submitted herewith, constitute a concise explanation for the foreign language documents on the attached list.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicants do not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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65565

CUSTOMER NUMBER

Date: August 24, 2007

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AUG 2
Substitute for Form 1449 A & B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

AUG 24 2007



				Complete if Known	
				Application Number	10/588,485
				Confirmation Number	8206
				Filing Date	August 4, 2006
				First Named Inventor	Masaaki HIRANO
				Art Unit	1614
				Examiner Name	not yet assigned
Sheet	1	of	8	Attorney Docket Number	Q96434

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code ² (if known)		
		US 20030191164	A1	10-09-2003	Masaaki HIRANO et al.
		US 4062686		12-13-1977	Eastman Kodak Company
		US 4119466		10-10-1978	Eastman Kodak Company
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		US 5104783		04-14-1992	Fuji Photo Film Co., Ltd.
		US 4636509		01-13-1987	Glaxo Group Limited
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		US 4946960		08-07-1990	Vickers PLC

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¹Applicant's unique citation designation number (optional). ²See Kind Codes of USPTO Patent Documents at www.uspto.gov, MPEP 901.04 or follow the hyperlink from the title of the document to the intranet. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the cited document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to indicate here if English language Translation is attached.

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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)			
		EP	333156	A2	09-20-1989	FUJI PHOTO FILM CO., LTD	abstract
		WO	9952888	A1	10-21-1999	AYUKO	abstract
		EP	780730	A2	06-25-1997	FUJI PHOTO FILM CO., LTD	Abstract
		WO	2005097090	A2	10-20-2005	ICOS CORPORATION	Abstract
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		WO	9804562	A1	02-05-1998	BAYER AG	Abstract
		DD	224422	A1	03-07-1985	VEB FILMFABRIK WOLFEN	Abstract
		JP	2000-095767	A	04-04-2000	TAKEDA CHEM IND LTD	Abstract
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		JP	03-259150	A	11-19-1991	MITSUBISHI KASEI CORP	Abstract
		JP	02-079007	A	03-19-1990	SUMITOMO ELECTRIC IND LTD	Abstract
		JP	02-189547	A	07-25-1990	FUJI PHOTO FILM CO., LTD	Abstract
		JP	02-054268	A	02-23-1990	FUJI PHOTO FILM CO., LTD	Abstract
		JP	03-164722	A	07-16-1991	FUJI PHOTO FILM CO., LTD	Abstract
		JP	63-032542	A	02-12-1988	MITSUBISHI CHEM IND LTD	Abstract
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		JP	59-064840	A	04-12-1984	MITSUBISHI CHEM IND LTD	Abstract

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation ⁶
		Simone, Oncology: Introduction, Cecil Textbook of Medicine, 20.sup.th Edition, vol. 1, pp. 1004-1010, 1996. ..	
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		Jaro Komenda et al., Electrochemical Behavior and ESR Spectra of Nitro Substituted Mono-to and Debenzoylmethylenebenzthiazolines and Selenazolies, Collect. Czech. Chem. Commun. (1979), vol. 44(5), pp. 1540-51.	

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	<p>Collect. Czech. Chem. Commun. (1973), vol. 38(12), pp. 3616-3622. .</p> <p>A. Mistr et al., Organische Lichtempfindliche Stoffe V. Acylmethylenederivate Heterocyclischer Stickstoffhaltiger Basen ALS Sensibilisatoren Lichtempfindlicher Polymerer, Organic light-sensitive substances. Acylmethylene derivatives of heterocyclic nitrogen-containing bases as sensitizers for light-sensitive polymers.</p> <p>ABS</p> <p>Condensation of quaternary salts of 2-methylbenzothiazoles or selenazoles with substituted benzyl chlorides in pyridine gave 18 mono- and diacylmethylene derivs. of the general formula I (Y = S, Se; R1 = Me, Et; R2 = H, p-OMe, m-NO2, p-NO2, p-I; R3 = H, R2C6H4(SH:CH)nCO; n = 0,1), which were examined as sensitizing agents for light-sensitive poly(vinyl cinnamate) (II) [24968-99-8] and poly(vinyl p-azidobenzoate) [29928-09-4]. A dropwise addition of 0.033 mole quaternary benzothiazole salt to 0.033 mole corresponding acyl chloride at 10.deg. followed by 1 hr stirring at 20.deg. gave 49.9% 2-[(4-methoxybenzoyl)methylene]-3-ethylbenzothiazoline (I; Y = S; R1 = Et; R2 = p-OCH3; R3 = H; n = 0) [51936-64-2]. The light sensitivity data obtained for II indicated that Se, present in the heterocyclic I ring, was more effective than S, and that the substitution on the benzoyl ring decreased the light sensitivity effect of I through the substituent series p-OMe, m-NO2, CH:CH, p-I, p-NO2.</p>	
	<p>A. Mistr et al., Organische Lichtempfindliche Stoffe II. Benzoylmethylenederivate Heretocyclischer Stickstoffhaltiger Basen ALS Sensibilisatoren Fur Lichtempfindliche Polymere, Collect. Czech. Commun. (1971), vol. 36(1), pp. 150-163.</p> <p>ABS</p> <p>Alkyl toluate salts of substituted and unsubstituted benzothiazole and benzoselenazole are treated with BzCl in pyridine to prepare I (Y = S or Se, R = H or Bz, R1 = Me or Et) and analogs containing a Cl, Me, Et, MeO, or benzo group on the 6-membered ring. I (R = Bz) had greater light sensitizing activity in poly(vinyl cinnamate) and poly(vinyl p-azidobenzoate) than did I (R = H), and the benzoselenazoline photosensitizers were more active than the benzothiazoline photosensitizers. Substituents at the 5-position on the aromatic ring had no effect and 6-methoxy substituents, a small pos. effect on sensitizing activity. Varying the R1 alkyl substituent affected solubility but not sensitizing activity.</p>	

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		<p>G.I. Gaeva and K.S. Liadikov, Zh. Nauch. Prikl. Fotogr. Kinematogr. (1971) vol. 16(4), pp. 282-288.. Sensitization of poly(vinyl cinnamate) by derivatives of benzoyl- and dibenzoylmethylenebenzothiazoline and -benzoselenazoline.</p> <p>ABS</p> <p>Of the 22 benzothiazoline dyes and benzoselenazoline dyes studied, of the general formula (I) (where Y = S or Se, R = Me or Et, R1 = H or COPh, R2 = COPh, R3 = H, Cl, MeO, and 4,5- or 6,7-benzo group), 1-methyl-2-(dibenzoylmethylene)benzoselenazole had the highest sensitization effectiveness and increased the light sensitivity of poly(vinyl cinnamate) (I) 2.5 times. The spectral sensitivity of dyes and their optimum concentration in I were determined. A sensitization mechanism was proposed.</p>	
		The Chemistry and Biological Activity of Synthetic and Natural Compounds: Nitrogen-Containing Heterocycles, Vol. 1 (2006), pp. 243-248.	
		Chemistry of Heterocyclic Compounds (New York, NY, United States)(Translation of Khimiya Geterotsiklicheskih Soedinenii) (2001), 37(5), 554-559	
		<i>Bioorganic & Medicinal Chemistry Letters</i> , Volume 15, Issue 11, 2 June 2005, Pages 2894-2897 Synthesis, in vivo and in vitro biological activity of novel azaline B analogs	

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Zh. Organic Khim. (1994), 30(6), 909-14

Zur. Organische
LA. Russian

Explanation: Found by CAS Search. CAS Search Result is set forth below.

L13 ANSWER 2 OF 4 HCABLUIS COPYRIGHT 2006 ACS or STN

L13 ANSWER 2 OF 4 HCAPLUS COP
AN 1995:373337 HCAPLUS Full-text

AN 1993.37323
DN 123:169551

ED Entered STN: 24 Feb 1995

ED Entered STN: 24 Feb 1995
TI C-Monobenzoylation and dibenzoylation of 2-methylbenzimidazole by benzoyl chloride

All. Dzvinchuk I. B.; Lozinskii M. O.; Vypirailenko A. V.

AU Dzvinchuk, I. B., Lozhinskii, M. O.,
CS Inst. Org. Khim. Kiev, Ukraine

CS Inst. Org. Khim., Kiev, Ukraine
SO Zhurnal Organicheskoi Khimii (1994), 30(6), 909-14

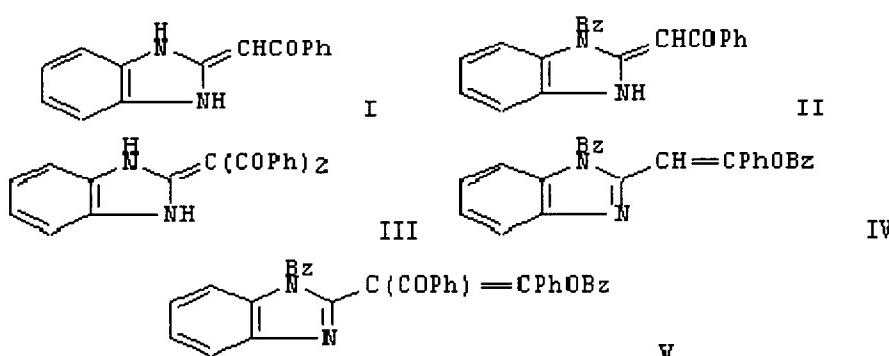
CODEN: ZORKAE; ISSN: 0514-7492

CODEN
PR Nauka

FB Nauka
DT Journal

DT Journal
LA Russian

LA
CO



AB Reaction of 2-methylbenzimidazole with BzCl in the presence of Et₃N gave monobenzoyl (**I**), dibenzoyl (**II** and **III**), tribenzoyl (**IV**), and tetrabenzoyl derivs. (**V**). The interconversion of these products and the effect of temperature were examined

ST benzoylation methylbenzimidazole; benzimidazole methyl benzoylation

IT Benzoylation

(of methylbenzimidazole by benzoyl chloride)

IT 615-15-6, 2-Methylbenzimidazole

RL: RCT (Reactant); RACT (Reactant or reagent)
(benzoylation of)

IT 98-88-4, Benzoyl chloride

RL: RCT (Reactant); RACT (Reactant or reagent)
(benzoylation of methylbenzimidazole by)

IT 67264-61-3P 167281-71-2P 167281-72-3P 167281-73-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

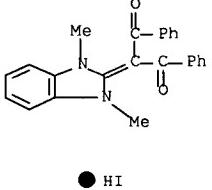
(benzoylato)

IT 74440-30-5P
RL: SPN (Synthetic preparation); PREP (Preparation)

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et. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor or the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated in the document under WIPO Standard ST. 11 if possible.

	<p>Bulletin de la Societe Chimique de France (1974), (3-4, Pt. 2), 525-8 ABS Benzimidazole series. V. Behavior of 2-methylene-1,3-dimethylbenimidazoline. Alkylation and acylation reaction. The title compound (I, X = CH₂) underwent substitution with halides to give I [X = CHMe, CHCHMe₂, CHCH₂Ph, CHC₆H₃(NO₂)₂-2,4, CHI, 4,6-dichloro-1,3,5-triazin-2-ylmethylene, CHAc, CHBz, CHSO₂Me, CAc₂, CBz₂, C(SO₂Me)₂], some of which were isolated as the 2-alkylbenzimidazolium salts. Dimeric acylation products were obtained with ClCO(CH₂)_nCOCl (n = 0,2).</p>  <p style="text-align: center;">● HI</p>
	Journal fuer Praktische Chemie (Leipzig) (1979), 321(2), 320-2
	Collection of Czechoslovak Chemical Communications (1978), 43(3), 739-45
	<p>Horumon to Rinsyo (Hormones and Clinical), 46, 46-57 (1998) ABS Gonadotropin releasing hormone is known as a hormone which controls secretion of sex hormones at the highest position, and controls secretion of anterior pituitary hormones luteinizing hormone and follicle-stimulating hormone and sex hormones in sex glands, via a receptor which is present in the anterior pituitary. Since antagonists specific and selective for this GnRH receptor regulate the action of GnRH and control secretion of subordinate LH and FSH and sex hormones, they are expected as preventive or therapeutic agents for sex hormone dependent diseases.</p>
	<p>Molecular Endocrinology 14 671-681 2000 Identification of Phe³¹³ of the Gonadotropin-Releasing Hormone (GnRH) Receptor as a Site Critical for the Binding of Nonpeptide GnRH Antagonists</p>
	<p>Molecular and Cellular Endocrin. 144 11-19 1998 Functional analysis of GnRH receptor ligand binding using biotinylated GnRH derivatives</p>
	<p>The Prostate 20 297-310 1992 Effect of microcapsules of luteinizing hormone-releasing hormone antagonist SB-75 and somatostatin analog RC-160 on endocrine status and tumor growth in the Dunning R-3327H rat prostate cancer model.</p>
	<p>Endocrinology 137 3430-3436 1996 Chronic administration of the luteinizing hormone-releasing hormone (LHRH) antagonist cetrorelix decreases gonadotrope responsiveness and pituitary LHRH receptor messenger ribonucleic acid levels in rats</p>
	<p>J. Med. Chem. 2005, 48, 1169-1178 3-[(2R)-Amino-2-phenylethyl]-1-(2,6-difluorobenzyl)-5-(2-fluoro-3-methoxyphenyl)-6-methylpyrimidin-2,4-dione (NBI 42902) as a Potent and Orally Active Antagonist of the Human Gonadotropin-Releasing Hormone Receptor. Design, Synthesis, and in Vitro and in Vivo Characterization</p>
	<p>Bioorg. Med. Chem. Lett. 14(9) 2269-2274 2004 Synthesis and structure-activity relationships of (R)-1-alkyl-3-[2-(2-amino)phenethyl]-5-(2-fluorophenyl)-6-methyluracils as human GnRH receptor antagonists</p>
	<p>Bioorg. Med. Chem. Lett. 15(10) 2519-2522 2005 Uracils as potent antagonists of the human gonadotropin-releasing hormone receptor without atropisomers</p>
	<p>Curr. Opin. Drug Discovery Dev. 7, 832-847, 2004 Synthesis of orally active small-molecule gonadotropin-releasing hormone antagonists</p>
	<p>Bioorg. Med. Chem. Lett. 15(5) 1407-1411 2005 Efficient synthesis of bicyclic oxazolino- and thiazolino[3,2-c]pyrimidine-5,7-diones and its application to the synthesis of GnRH antagonists</p>

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		Bioorg. Med. Chem. Lett. 15(9) 2265-2269 2005 Benzimidazoles as non-peptide luteinizing hormone-releasing hormone (LHRH) antagonists. Part 3: Discovery of 1-(1H-benzimidazol-5-yl)-3-tert-butylurea derivatives	
		J. Med. Chem. 2004, 47, 3483-3486 3-(2-Aminoalkyl)-1-(2,6-difluorobenzyl)-5- (2-fluoro-3-methoxyphenyl)-6-methyl- uracils as Orally Bioavailable Antagonists of the Human Gonadotropin Releasing Hormone Receptor	
		Bioorg. Med. Chem. Lett. 14 1795-1798 2004 Syntheses and structure-activity relationship studies of piperidine-substituted quinolones as nonpeptide gonadotropin releasing hormone antagonists	
		Bioorg. Med. Chem. Lett. 14 1599-1602 2004 Elimination of antibacterial activities of non-peptide luteinizing hormone-releasing hormone (LHRH) antagonists derived from erythromycin A	
		J. Med.Chem. 2004, 47, 1259-1271 Synthesis and Structure-Activity Relationships of 1-Arylmethyl-5-aryl-6-methyluracils as Potent Gonadotropin-Releasing Hormone Receptor Antagonists	
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	<p style="text-align: center;">I II III IV</p>
	The reactions of thioacetals and dithiolates were described. Thus, $(RCO)2C:C(SMe)2$ ($R = Me, Ph$) reacted with $PhCH2NH2$ to give $(RCO)2C:CR1R2$ ($R1 = SMe, R2 = NHCH2Ph; R1 = R2 = NHCH2Ph$) and $(PhCO)2C:C(SMe)2$ reacted with dinucleophiles, e.g., $(H2NCH2)2$ and $\alpha-(H2N)2C6H4$, to give cyclic heteroacetals, e.g. I ($X = CH2CH2 \alpha-C6H4$). Alkylation of $MeCO(PhCO)C:C(S-)2$ with $CICH2CN$ gave thienothiophene II via an open-chain S,S-acetal and subsequent cyclization. $PhCOCH2COCH2Ph$ reacted with $CS2$ and NaH to cleave $Na2S$; alkylation of the product with MeI gave thiopyranone III. Treating $(PhCOCH2)2$ with $PhNCS$ gave $PhCOC(CH2COPh):C(NHPh)S-$ which was cyclized and methylated to give pyrrole IV.
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Examiner Signature	/Valerie Rodriguez-garcia/	Date Considered	07/09/2009
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